



# United States Department of the Interior

BUREAU OF LAND MANAGEMENT  
MEDFORD DISTRICT OFFICE  
3040 Biddle Road  
Medford, Oregon 97504  
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IN REPLY REFER TO:  
1792 (116)  
Slashbuster 4  
& Manual EA  
A7066(WHY:jl)

APR 14 2003

Dear Interested Citizen:

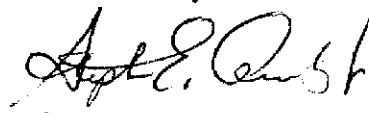
The **Environmental Assessment (EA)** for the **Slashbuster 4 and Manual Treatment Project** is being advertised in the Medford Mail Tribune for a 30-day public review period beginning April 16, 2003. This project proposes to reduce fuel hazard by thinning approximately 293 acres of BLM administered lands. Vegetation proposed to be thinned includes non-commercial conifer trees, oak woodlands, and shrublands. Vegetation would be thinned using mechanical and manual techniques of cutting and chipping, such as the slashbuster, and/or using hand crews with chain saws. Slash created by the project would be chipped on site (if using slashbuster), or hand piled and burned if cut by hand crews. The location is approximately 2 miles northeast of Applegate, Oregon. The details of the project proposal and an analysis of the effects of the project are contained in the enclosed EA.

The primary purpose of the review is to provide the public with an opportunity to comment on the BLM's determination that there are no significant impacts associated with the proposed action which are beyond those expected and described in the Medford District RMP/EIS or the Northwest Forest Plan EIS and Supplemental EIS to which this EA is tiered, and therefore, an environmental impact statement is not necessary.

The comments received, including names and addresses, will be available for public review. Individual respondents may request confidentiality. If you wish to withhold your name and/or address from public review or from disclosure under the Freedom of Information Act, you must state this prominently at the beginning of your written comment. Such requests will be honored to the extent allowed by law. All submissions from organizations or businesses, and from individuals identifying themselves as representatives or officials of organizations or businesses, will be made available for public inspection in their entirety.

Further information on this proposed project is available at the Medford District Office, 3040 Biddle Road, Medford, Oregon 97504 or by calling the Ashland Planning Department at (541) 618-2384. The EA and maps are posted on the Medford District web site [www.or.blm.gov/medford](http://www.or.blm.gov/medford) under Planning Documents/Environmental Assessments.

Sincerely,

  
for Richard J. Drehabil  
Field Manager  
Ashland Resource Area

Enclosure (as stated)

U. S. DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
MEDFORD DISTRICT  
ASHLAND RESOURCE AREA

ENVIRONMENTAL ASSESSMENT

FOR

Slashbuster 4 and Manual Treatments

EA No. OR-110-03-05

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
ASHLAND RESOURCE AREA

EA COVER SHEET

**Project Name/Number:** Slashbuster 4 and Manual Treatments EA/OR-110-03-05

**Location:** Ashland Resource Area

<b>Specialist</b>	<b>Title</b>	<b>Resource Value</b>
Luis Ramirez	Forestry Technician	Team Lead
Dave Squyres	Hydrologist	Water, Riparian
Victoria Arthur	Wildlife Biologist	Wildlife, T&E Animals
Greg Chandler	Fuels Mgt. Specialist	Fire Hazard Reduction
Mark Steiger	Botanist	S&M/T&E Plants
John Samuelson	Engineer	Transportation/Roads
Fred Tomlins	Recreation Specialist	Cultural Resources
Jennifer Smith	Fisheries Biologist	Fisheries
Bill Yocum	Environmental Planner/Coord.	NEPA Format/Adequacy

**ASHLAND RESOURCE AREA - Slashbuster 4 and Manual Treatments EA**

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## CHAPTER 1

### A. INTRODUCTION

The Bureau of Land Management (BLM) proposes to reduce fuel hazard by thinning approximately 293 acres of BLM administered lands. Vegetation proposed to be thinned includes non-commercial conifer trees, oak woodlands, and shrublands.

This document complies with the Council on Environmental Quality's (CEQ) Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act (NEPA; 40 CFR Parts 1500-1508) and the Department of the Interior's manual guidance on the National Environmental Policy Act of 1969 (516 DM 1-7).

### B. PURPOSE AND NEED

The purpose of the proposed project would be to reduce the hazard of a catastrophic wildfire by reducing the fuel loading. The absence of frequent landscape wildfire has led to high tree and brush density levels and dense patches of non-commercial size conifers.

The Medford District Resource Management Plan (RMP) established guidelines for the management of BLM lands, and responds to the need for forest habitat. According to the RMP, the need for forest habitat is the need for a healthy forest ecosystem with habitat that will support populations of native species.

Several fuel management strategies are used when reducing fire hazard on a broad scale. One strategy is to reduce ladder and surface fuels over the landscape. This Environmental Assessment recommends reducing fire hazard in the proposed project area, utilizing mechanical and/or manual manipulation of live and dead vegetation with some prescribed fire as an initial treatment with future maintenance treatments being light underburns. The proposed project area would treat four parcels of land in the Humbug Creek drainage.

Two alternatives were developed for this project. A description of these alternatives can be found in Chapter II of this document.

### C. CONFORMANCE WITH EXISTING LAND USE PLANS

The proposed activities are in conformance with and tiered to the *Record of Decision and Standards and Guidelines for Amendments to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines* (Amended Northwest Forest Plan) (USDI, USDA 2001) and the *Medford District Record of Decision and Resource Management Plan* (RMP) (USDI 1995b). These Resource Management Plans incorporate the *Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Owl and the Standards and Guidelines for Management of Habitat for Late-Successional and Old-Growth Forest Related Species Within the Range of the Northern Spotted Owl* (NWFP) (USDA and USDI 1994). These documents are available at the Medford BLM office and the Medford BLM web site at <<http://www.or.blm.gov/Medford/>>.

#### **D. RELATIONSHIP TO STATUTES, REGULATIONS, AND OTHER PLANS**

The proposed action and alternatives are in conformance with the direction given for the management of public lands in the Medford District by the Oregon and California Lands Act of 1937 (O&C Act) and the Federal Land Policy and Management Act of 1976 (FLPMA).

#### **E. DECISIONS TO BE MADE ON THIS ANALYSIS**

This environmental assessment (EA) is being prepared to determine if the proposed action and any of the alternatives would have a significant effect on the human environment thus requiring the preparation of an environmental impact statement (EIS) as prescribed in the National Environmental Policy Act of 1969 (NEPA). It is also being used to inform interested parties of the anticipated impacts and provide them with an opportunity to comment on the various alternatives.

The Ashland Resource Area Field Manager must decide:

- Whether or not the impacts of the proposed action are significant to the human environment beyond those impacts addressed in previous NEPA documents. (If the impacts are determined to be insignificant, then a Finding of No Significant Impact (FONSI) can be issued and a decision can be implemented. If any impacts are determined to be significant to the human environment, then an Environmental Impact Statement must be prepared before the Manager makes a decision.)
- Whether to implement the proposed action alternative or defer to the no action alternative

#### **F. ISSUES OF CONCERN**

The following issues were identified during the scoping process. All issues were reviewed by the Interdisciplinary Team. Issues that directly relate to the proposed action were analyzed in detail.

1. Due to long term absence of fire, vegetation is now at a condition where fire hazard is very high. Recent fires in the Applegate have shown that significant damage and long term destruction of natural resources are likely in the event of a large wildfire.
2. Disturbance to nesting birds and other wildlife during the spring reproductive period.
3. The spread of noxious weeds and other invasive, non-native species.

## CHAPTER 2 Alternatives

### A. INTRODUCTION

This chapter describes the proposed action alternative and the no action alternative. This chapter also outlines specific project mitigation features described as Project Design Features (PDFs) which are designed as part of the alternative. PDFs reduce or eliminating anticipated adverse environmental impacts

The Ashland Resource Area has developed a proposed action designed with the project objective outlined in the Middle Applegate Watershed Analysis (pages 85-95) and in accordance with the best management practices as outlined in the Medford District RMP (pages 149-177).

### B. PROPOSED ACTION ALTERNATIVE

Reduce fire hazard by thinning vegetation on 293 acres of federal land. Vegetation would be thinned using mechanical and manual techniques of cutting and chipping, such as the slashbuster, and/or using hand crews with chain saws. Slash created by the project would be chipped on site (if using slashbuster), or hand piled and burned if cut by hand crews. Some material may be removed from the site in the form of poles, firewood or other special forest products. Material to be cut would be less than eight (8) inches in diameter at breast height. Future (approximately 3 to 5 years) maintenance treatments are planned utilizing a light underburn in portions of the units.

Unit Name	Acres	Proposed Treatment	Location
N6	61	Handpile	T38S,R4W, Section 3
N7	81	Handpile	T38S,R4W, Section 2
N10	102	Handpile	T38S,R4W, Sections 11-14
N11	49	Slashbuster/ Handpile	T38S,R4W, Section 23
Total Acres	293		

Location map is located in Appendix A

The Project Design Features (PDFs) with an asterisk (\*) are Best Management Practices (BMPs) to reduce nonpoint source pollution to the maximum extent practicable. BMPs are considered the primary mechanisms to achieve Oregon Water Quality standards. Implementation of PDFs in addition to establishment of Riparian Reserves would equal or exceed Oregon State Forest Practice Rules. BMP effectiveness monitoring would be conducted and where necessary, BMPs modified to ensure compliance with Oregon Water Quality Standards.

### Pre-commercial Thinning of Forested Stands and Non-commercial Thinning of Woodlands and Brushlands

- A. Vegetation would be thinned using mechanical and manual techniques of cutting and chipping, such as slashbuster, and/or using hand crews with chainsaws. Slash created by the project would

- be chipped on site (if using slashbuster), or hand piled and burned if cut by hand crews. No piling in dry draws would be allowed.
- B. Manual treatment of fuels consists of hand cutting of existing ladder fuels and then hand piling this material so it can be burned.\*
  - C. To minimize loss in soil productivity and surface erosion, the average unit slope for mechanical operations would be less than 35%.\* The maximum slope for the slashbuster would be 45%, but only on short pitches less than 300 feet outside of Riparian Reserves. Any mechanical operations on fragile soils (as shown on the BLM GIS Soils mapping or identified by the Soil Scientist) would be limited to slopes of 25% or less.\*
  - D. In order to provide for escape, hiding, thermal, and nesting cover for a variety of species, 15 to 20% of the proposed area would be left in an untreated condition. These reserves would be in addition to untreated riparian reserve areas. Reserves should be scattered across the project area. In addition, all overstory hardwood trees in units would be reserved.
  - E. When operationally possible, do not cut or burn units during the height of the spring reproductive period, April 1st through June 30<sup>th</sup>, to protect nesting bird and wildlife species.
  - F. Mechanical crossings through dry draws would be limited and approved by authorized officer; equipment would not drive up or down the draw bottoms. Crossings through dry draws (with no Riparian Reserve) would be limited and approved by authorized officer; mechanical equipment would not drive up the draw bottoms.\* Crossings would not require any cutting, leveling, or disturbance of banks.
  - G. Old skidroads would not be opened or driven on without the approval of the authorized officer.\* Cut material or slashbuster material will be placed on the running surface of old skid roads or jeep roads that are authorized to be used.\* Old skidroads would not be treated near the intersections with system roads in order to provide a visual screen and discourage vehicular access.
  - H. To reduce the spread of star thistle, Unit N11 would have mechanical operations prior to seed set and limited to when the soil moisture is 18% or less; normally between April 1<sup>st</sup> to May 15<sup>th</sup>.
  - . Any skid trails used would be water barred utilizing the spacing and construction techniques outlined in the Medford District RMP (RMP, p.167).\* Any tractor skid trails used would be blocked with an earth and log barricade where they intersect haul roads.\* The intent is to minimize erosion and routing of overland flow to streams by decreasing disturbance.
  - . Old skidroads would not be treated near the intersections with system roads in order to provide a visual screen and discourage vehicular access.

### **Prescribed Burning of Forested Stands and Non-commercial Thinning of Woodlands and Brushlands**

An array of fuel treatments would be utilized in the project area to modify vegetative patterns and reduce high fuel levels. Factors such as existing and projected fuel loading, existing vegetative conditions, slope, and access would be taken into consideration when prescribing the type of fuels management treatment that would be implemented. These treatments include mechanical methods, manual treatments, prescribed burning, or a combination of these treatments. All fuel management activities would meet Aquatic Conservation Strategy and Riparian Reserve objectives.

- A. Leave two unburned handpiles per acre to benefit wildlife.
- B. The objective of the pile burning would be a cool burn with 90% consumption that leaves an unburned ring of woody material on the ground.
- C. Whenever possible, pile burning and underburning would be planned and scheduled to result in low intensity burns to reduce the loss of organic matter, nutrients, subsequent site productivity, and to lessen surface erosion. All fuel management activities occurring within the project area would meet Aquatic Conservation Strategy (ACS) and Riparian Reserve objectives.



- D. Do not burn any hand piles that are on the first 50 feet of old skid trails adjoining the BLM road system.
- E. Complete mop-up as soon as practical to reduce potential level of smoke emissions.
- F. Cover hand piles to permit burning during the rainy season and to ensure lower fuel moisture to facilitate quick and complete combustion while reducing potential level of smoke emissions.
- G. Burn during the rainy season when there is a stronger possibility of atmospheric mixing and/or scrubbing to allow for better smoke dispersion.
- H. When operationally possible, do not burn during the height of the spring reproductive period, April 1st through June 30th, to protect nesting bird and wildlife species.
- I. Activities within riparian areas occurring within the project area would meet ACS and Riparian Reserve objectives.
- J. Piles would be burned in a manner that keeps residual tree mortality at a minimal level.

### **Streams, Fish and Riparian Reserves**

#### Water Quality Protection

The BLM, in cooperation with the Forest Service, Oregon Department of Environmental Quality (ODEQ), and the Environmental Protection Agency (EPA), is implementing the *Forest Service and Bureau of Land Management Protocol for Addressing Clean Water Act Section 303(d) Listed Waters* (USDA and USDI 1999) (Protocol). Under the Protocol, the BLM agrees to protect and maintain water quality where standards are met or surpassed, and restore water-quality-limited waterbodies within their jurisdiction to conditions that meet or surpass standards for designated beneficial uses. The Protocol serves as a framework for developing water quality restoration plans, specific to BLM-administered lands, which are used to guide and can be incorporated by reference into ODEQ's Water Quality Management Plans (WQMPs). In areas where BLM management actions have either short- or long-term effects on BLM-administered lands and adjacent waters, the BLM will work toward water quality improvement.

The BLM will also adhere to the State Antidegradation Policy (ODEQ 1992; 340-041-0026). The BLM will continue supporting ODEQ's efforts to work with land managers and designated management agencies in total maximum daily load (TMDL) development and implementation plans [e.g., water quality management plans (WQMPs)]. Best Management Practices (BMPs) and effectiveness monitoring as described in the Medford District RMP (USDI 1995) would ensure that TMDLs are being met on BLM-administered lands.

#### Riparian Reserve Determination

Northwest Forest Plan (NWFP) Riparian Reserves are located on federal lands throughout the project area. In order to ensure that all areas needing Riparian Reserve protection were covered, BLM conducted surveys of each drainage within the project area. The survey crew assessed stream condition, documented the location of wetland and unstable areas, and determined whether stream channels were perennial, intermittent, or dry draws (NWFP Standards & Guidelines, pages C30-C31). In addition, existing maps were updated using the new information. For locations of Riparian Reserves, refer to the Riparian Reserve map in the EA file for the Amended Ferris Bugman Environmental Assessment, available by request.

Riparian Reserve widths were determined site-specifically using the guidelines on page C-30 and C-31 of the NWFP Standards and Guidelines. Riparian Reserve widths in the Slashbuster 4 project area are as follows:

- A. Fish streams: between 320' and 360' slope distance on each side of the stream.
- B. Perennial nonfish-bearing streams: between 160' and 180' slope distance on each side of the stream.

- C. Intermittent nonfish-bearing streams: between 100' and 180' slope distance on each side of the stream.
- D. Unstable and potentially unstable ground: the extent of the unstable and potentially unstable ground.
- E. Springs, seeps and other non-stream wetlands less than one acre in size: 100' slope distance from the edge of the wetland and associated vegetation.

Implementation of Riparian Reserve widths can be wider if necessary, but they can never be less than the specified distances.

#### Vegetation Treatments in Riparian Reserves

- A. Treatments would only take place in Riparian Reserves adjacent to pre-commercial treatments (PCT) and non-commercial treatments (NCT) units. Prior to implementation of any treatments, resource specialists (hydrologist, fisheries, and wildlife biologists) would make a review to assure compliance with the objectives of the Aquatic Conservation Strategy.\*
- B. Mechanical vegetation treatments would not occur within Riparian Reserves on: fish-bearing and perennial streams; springs, seeps, and wetlands; and unstable and potentially unstable areas.
- C. Mechanical vegetation treatments would not occur on short- and long-duration intermittent streams within a minimum of 25 feet from the stream in hardwood/brush stands and 50 feet from streams in conifer stands, or the top of the slope break, whichever is greater.\* (This is due to observed differences in soil sensitivity to disturbance between riparian woodland/brush and conifer stands.).
- D. Machines conducting mechanical vegetation treatments (such as The "Slashbuster") would enter the Riparian Reserves perpendicular to the stream channel, to avoid creating a parallel track path along an edge of untreated vegetation.
- E. Manual vegetation treatments would not occur in the following areas: within 50 feet of fish-bearing and perennial streams; within 50 feet from the edge of springs, seeps, and wetlands; within Riparian Reserves for unstable and potentially unstable areas; and within 25 feet of long-duration intermittent streams.\*
- F. Manual vegetation treatments would occur along short-duration intermittent streams where necessary to reduce fuel loading.
- G. Riparian hardwood species such as willow, ash, maple, alder, and black oak would not be thinned.\*
- H. Thinned material may be "lopped and scattered" in specific areas where pile burning is not desirable.
- I. Crossing channels with vehicles or equipment, including ATVs and slashbuster, would be limited to existing system roads.\*
- J. No machinery would be driven through riparian areas or stream channels. (Riparian Area: Those terrestrial areas where the vegetation complex and microclimate conditions are products of the combined presence and influence of perennial and/or intermittent water, and associated high water tables and soils which exhibit some wetness characteristics. Normally used to refer to the zone within which plants grow rooted in the water table of these rivers, streams, lakes, ponds, reservoirs, springs, marshes, seeps, bogs, and wet meadows). Where this limitation inhibits access to mechanical treatment units, these units would be treated manually.
- K. Piles would not be placed in channel bottoms.
- L. Down large woody debris over 16" diameter would not be damaged, driven over, or used for fire wood.

**Table 1. Riparian Reserve buffer distances – non-commercial treatment areas**

	<b>Manual treatments</b>	<b>Mechanical treatments</b>	<b>Pile burning</b>
Fish-bearing	50' buffer	Not allowed in RR	50' buffer
Perennial	50' buffer	Not allowed in RR	50' buffer
Long-duration intermittent	25' buffer	50' buffer for machine; can reach in to extent of cutter	25' buffer
Short-duration intermittent	Where necessary (treating through is OK, as prescribed)	50' buffer for machine; can reach in to extent of cutter	No piles in the channel or draw bottoms
Springs/seeps/wetlands	50' buffer	Not allowed in RR	50' buffer
Unstable areas	Not allowed in RR	Not allowed in RR	50' buffer

Prescribed Fire Treatments in Riparian Reserves: PDFs for vegetation treatments in Riparian Reserves would apply to fuels treatments. Site visits by a hydrologist, fish biologist, and/or wildlife biologist may result in more restrictive PDFs for the Riparian Reserve portion of proposed fuel treatment units.\*

#### *Pile Burning*

- A. No mechanical piling would occur in Riparian Reserves.
- B. Hand pile burning would not take place within: 50 feet each side of fish-bearing and perennial streams; 50 feet from the edge of springs, seeps, and wetlands; 25 feet each side of long-duration intermittent streams; no piles in channel/draw bottoms of short-duration intermittent streams, or to the top of the slope break for all of the above classifications, whichever is greater.\*
- C. Treated vegetation could be “lopped and scattered” in areas where hand pile burning is not allowed.\* Where feasible, this vegetation should be dragged outside the no-treatment zone and piled.

#### *Broadcast and Underburning*

- A. With underburns, no ignition would occur within Riparian Reserves,\* but backing fire may be allowed to burn down into a Reserve, especially into the non-riparian portions with fire dependant vegetation such as ceanothus and white oak. This would depend on site-specific analysis.
- B. Fire lines would be avoided in Riparian Reserves in order to prevent the creation of “mini roads” that could route sediment into water bodies.\*
- C. Foam would not be used in Riparian Reserves.\*

#### *To minimize the spread of noxious weeds*

- A. Vehicle movement into the units would be limited to the dry season.
- B. Mechanical equipment would be power sprayed and washed before entering and leaving Unit N11.
- C. A no treatment buffer of 20 feet along all open roads would be required.
- D. Seeding of native grasses and/or sterile wheatgrass on disturbed soil (e.g., main entry points into units, burn pile scars, etc.) would occur.
- E. Canada thistle, star thistle, and bull thistle infest roadsides in a few locations in the project area. To reduce the existing population, the following control treatments could be authorized: insect release as bio-control, weeding by hand, and using fire to burn plants before seed release. As a last resort, additional treatment with herbicides (as outlined in

the Medford District's Integrated Weed Management Plan and EA #OR-110-98-14) would occur. Areas lacking native seed bank would be seeded with native grass.

*Special Status Species*

All plant buffers boundaries would be marked on the ground with a posted and painted boundary.

*Clarkia heterandera*: all known occurrences will be buffered with a 150 ft radius buffer.

*Cultural Resources*

All known cultural sites have been identified and would be avoided.

**C. NO ACTION ALTERNATIVE**

Do not thin the planned units. The high fire hazard would remain unchanged and the probability of a catastrophic wildfire event would increase yearly. Maintenance broadcast burning would not occur because the high amount of ground fuel could create unacceptable resource damage if ignited.

## **CHAPTER 3**

### **AFFECTED ENVIRONMENT**

#### **A. INTRODUCTION**

This chapter describes the present conditions within the proposed project area that would be affected by the alternatives. The information in this chapter serves as a general baseline for determining the effects of the alternatives. No attempt has been made to describe every detail of every resource within the proposed project area. Only enough detail has been given to determine if any of the alternatives would cause significant impacts to the environment (additional detail is located in the EA file which is available for review by calling 541-618-2384).

#### *Streams within project units*

Vegetation, climatic, geologic and other processes related to hydrology are discussed in the Middle Applegate Watershed Analysis. Additional related information is also available in the Amended Ferris Bugman Environmental Assessment.

Unit N7 (see Unit Location Map) is located in areas draining to Kidney Gulch, a tributary to Humbug Creek. The unit contains three short-duration intermittent streams (streams that run only in response to precipitation events, generally for 30 days or less) and several dry draws (draws lacking a defined channel and evidence of annual scour and deposition).

Unit N6 is located in areas draining to Kidney Gulch, tributary to Humbug Creek. Two short duration intermittent streams and several dry draws are located within the unit, and a perennial stream is immediately east of unit.

The portions of Unit N10 located in Sections 11 and 12 are located in areas draining into the mainstem of Humbug Creek above Balls Branch, and contain one long duration intermittent stream, two short duration intermittent streams, and numerous (10+) dry draws.

The portions of Unit N10 located in sections 13 and 14 contain three short duration intermittent streams and several dry draws. All drain into Balls Branch, a perennial fish-bearing tributary to Humbug Creek. Balls Branch is located a few hundred feet downslope of the unit; the fish-bearing portion of Balls Branch is further downstream (see discussion in *Fisheries and Aquatic*).

Unit N11 contains one long duration intermittent stream, one short duration intermittent stream, and several dry draws. This area drains into the lower end of mainstem Humbug Creek.

### Water quality

By state law, water quality is to be managed to protect recognized beneficial uses in the Middle Applegate Watershed including domestic water supply, municipal water supply, industrial water supply, irrigation, livestock watering, cold water fish, other aquatic life, wildlife, recreation, aesthetics, and power development. State standards are designed to protect the most sensitive beneficial use within a waterbody. Stream temperature has been identified by the Oregon Department of Environmental Quality (DEQ) as a problem on some streams in the vicinity of the project area.

The portion of the Applegate River flowing adjacent to the project area is on the DEQ 1998 list of water quality limited streams, also known as the 303(d) list from Section 303(d) of the 1972 Federal Clean Water Act (CWA). The River is listed for high summer stream temperatures and flow modification. With flow regulation by Applegate Dam beginning in 1981, summer flows are higher and stream temperatures are lower than prior to the dam (MAWA 1995, pg. 58). Summertime river temperatures are still well above the 64° Fahrenheit (F.) standard established by DEQ. Humbug Creek, a tributary to the Applegate River, is proposed for listing on the 303(d) list based on stream temperatures recorded near the mouth. Other streams within the project area are not listed for any 303(d) list concerns. Although actions proposed in this EA are not directly adjacent to the Applegate River itself, and the total flows out of project area tributaries represent only a small percentage of the total flow in the River at this location, the cumulative effect of water quality in these type of streams throughout the Applegate Subbasin (the entire Applegate River drainage) is a very important factor in the water quality of the river.

Stream temperature has been monitored at several locations within the project area.

Temperatures on all monitored streams on federal lands within the project area are below the 64° F. DEQ standard. Summer flows originating out of this area are very low, with much of the flow subsurface. Most of the perennial portions of project area streams have heavy riparian cover, further maintaining cool stream temperatures.

### Fisheries and Aquatic Wildlife

The project area includes a 142 acre parcel along Ferris Gulch, 2 parcels along Humbug Creek, with one of these parcels also bordering Balls Branch, a tributary to Humbug, and 2 along Kidney Gulch, a tributary to Humbug.

Ferris Gulch does not support fish due to an impassable culvert off of Highway 238, a gravel mining operation in the riparian corridor just above the mouth, and an irrigation canal that intercepts Ferris Gulch ½ mile before it makes it to the Applegate. The project area on Ferris Gulch is approximately ¾ mile from the Applegate River, which supports coho (*Oncorhynchus kisutch*) and chinook salmon (*O. tshawytscha*), steelhead (*O. mykiss*), rainbow trout (*O. mykiss*),

and cutthroat trout (*O. clarki*). There are other native species that may be present in the Applegate including Pacific lamprey (*Lampetra tridentata*), sculpins (*Cottus* spp), and Klamath smallscale suckers (*Catostomus rimiculus*) but their distribution is not well known.

Humbug Creek supports steelhead from the mouth to approximately 1 ½ miles up and cutthroat for up to approximately 4 miles. Both slashbuster units on Humbug are 1/4 mile or more from Humbug, which is surrounded by private land. Humbug Creek drains into the Applegate. The closest unit to the Applegate River is 3/4 mile away. ODFW surveys (2000) have found cutthroat at the mouth of Balls Branch, and they may go up through private land (access for surveys was denied on private land). The 2 units along Kidney Gulch, a tributary to Humbug, are 1/4 mile from Kidney Gulch and 1/4 mile from Humbug. Kidney Gulch has cutthroat for approximately ½ mile up.

Both drainages provide habitat for other aquatic organisms such as Pacific giant salamanders (*Dicamptadon tenebrosus*), yellow legged frogs (*Rana boylei*), and aquatic garter snakes (*Thamnophis couchi*). There is little to no survey data for these species.

#### Fish Habitat and Riparian

Fish passage in Ferris Gulch is blocked at the mouth by an impassable culvert under Hwy 238. Just above this, a gravel mining operation is in the riparian corridor, diverting all flows and leaving no riparian vegetation. Above the mining, Ferris Gulch is intercepted by an irrigation canal which further diverts flows from reaching the Applegate (BLM fish presence/absence survey, 1998). Roads and OHV trails run along the stream. Riparian vegetation in the southern reaches of Ferris Gulch is primarily oak woodlands, while further north it turns to mixed conifer woodlands (ODFW surveys, 2002).

Although fish are present in Humbug Creek up to 38S-4W-section 2, most of the habitat in this section is poor with little woody debris and as a result very few pools (ODFW surveys 2002). A non-functional diversion dam at river mile 4.2 prevents fish passage under low flow conditions. The Humbug Creek drainage burned in the major fire of 1931. The intermittent tributaries to Humbug have riparian vegetation characterized by extremely thick, dense, second growth Douglas-fir of less than 6 inches DBH, or manzanita and buck brush. There is very little undergrowth or a second canopy layer due to the overgrown condition of the primary vegetation. There is also very little CWD, which may be a result of past forest fires, past gold-mining, or a combination of the two (BLM fish presence/absence survey, 1998) .

Fish habitat in Kidney Gulch is an exception and in good condition. There are suitable gravels free of sediment for spawning and riparian vegetation is providing adequate shade and providing

woody debris for creation of pools. It is unknown why fish use ends ½ mile up. Many Pacific giant salamanders are also found in Kidney Gulch (ODFW 2002).

#### Vascular Plant Species

All of the proposed activity areas were surveyed for Bureau Special Status and Survey and Manage vascular plants as well as the federally listed *Fritillaria gentneri*. Surveys were conducted by qualified botany contractors in 1998. Surveys documented five occurrences for two species.

Species	Status	Occurrences
<b>Clarkia heterandera</b>	<b>BAO</b>	<b>1</b>
<b>Lithophragma heterophyllum</b>	<b>BTO</b>	<b>4</b>

*Lithophragma heterophyllum* is a Bureau Tracking Species (BTO) and does not require mitigation.

#### Nonvascular plant species

All of the proposed activity areas were surveyed for the presence of Survey and Manage and Bureau Special Status fungi, lichens, and bryophytes in the summer and fall of 2001 in accordance with established protocols. No Bureau Special Status or Survey and Manage fungi, lichens, or bryophytes were found.

#### Wildlife

A gradual loss of wildlife habitats such as oak savannahs, meadows, and brushfields has resulted from the exclusion of fire from the landscape. Treatments such as oak woodland and brushland thinning and prescribed burning are designed to promote forest health and are expected to benefit some wildlife species by restoring these habitat communities. The proposed treatment areas consist of oak woodland and brushland vegetation types. Many wildlife species utilize these habitat types, including birds, small mammals, reptiles, and deer.

In most cases, the proposed treatment areas are **not** within suitable habitat for the following list of species.

#### Threatened and Endangered Species – Northern spotted owl

The northern spotted owl is listed as a threatened species under the auspices of the Endangered Species Act of 1973, as amended. BLM is required to formally consult with the U.S. Fish and Wildlife Service on actions that would adversely affect northern spotted owls.



None of the proposed treatment areas are within suitable nesting or dispersal habitat for this species.

*Special Status Species, Survey and Manage Species, and Migratory Bird Treaty Act Species*

For purposes of management action concerns, species are recognized as “special status” if they are federally listed as Threatened or Endangered, proposed for federal listing as Threatened or Endangered, or if they are a BLM Sensitive or Assessment species. BLM policy is to manage for the conservation of these species and their habitat so as not to contribute to the need to list and to recover these species.

*Survey and Manage (S&M)/Protection Buffer Species*

The amended NWFP Supplemental EIS ROD, Amendments to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines, January 2001, provides extra protection for some species through Survey and Manage (S&M) standards and guidelines.

*Great Gray Owl (Strix nebulosa)*

The great gray owl is a Bureau Tracking and Survey and Manage species. Great gray owls in this part of their range nest in mature/late seral mixed conifer and white fir forests, and forage primarily in the meadows/grassland or early seral stand conditions of conifer forests. Surveys have been completed for this species in suitable habitat within the surrounding Bugman project area. None of the proposed treatment areas contain suitable nesting habitat for this species.

*Northern Goshawk (Accipiter gentilis)*

This is a Bureau Sensitive species. In this part of the species’ range, it nests in mature and old growth stands, and forages in a variety of stand types and ages. All of the proposed project area is suitable for goshawk foraging. No surveys have been performed for this species in the project area, and none are required. No known goshawk nest sites are in the proposed project vicinity.

*Flammulated Owl (Otus flammeolus)*

The flammulated owl is occasionally observed throughout SW Oregon. The Amended NWFP (2001) calls for the retention of additional large snags in harvest units in areas where this species occurs. Primary habitat is conifer forest intermixed with oak-woodland and grassland in the Mixed Conifer Zone. This species nests in cavities created by other bird species (pileated woodpecker, flicker) in large pine trees and snags. No surveys have been performed, and none are required.

*Red Tree Vole (Arborimus longicaudus)*

The red tree vole is a small arboreal mammal that is listed as a S&M Species. Surveys have been completed for this species in suitable habitat within the surrounding Bugman project. No known sites were located during these surveys. None of the proposed treatment areas covered in this EA contain suitable habitat for this species.

*Siskiyou Mountains Salamander (Plethodon stormi)*

This is a Bureau Assessment and S&M species. The Siskiyou Mountains salamander has a very limited geographic range, found in surface rock and talus habitat in parts of southern Oregon and northern

California. Surveys have been completed for this species in suitable habitat within the surrounding Bugman project. There are no known sites within the proposed treatment areas covered in this EA.

*Black Salamander (Aneides flavipunctatus)*

This is a Bureau Assessment species. Surveys completed for Siskiyou Mountains salamanders in the surrounding Bugman project area have not located this species.

*Fisher (Martes pennanti)*

The fisher is a Bureau Sensitive species. Preferred habitat is dense conifer forests in the mixed conifer and white fir zones. None of the proposed treatment areas are considered suitable habitat for this species. There are no specific protection measures prescribed for this species. No surveys have been performed, and none are required.

*Townsend's Big-eared Bat (Plecotus townsendii)*

The Townsend's big-eared bat is a Bureau Sensitive species. Although this species is not listed as a Survey and Manage species, the Amended NWFP (2001) calls for the protection of specific types of roost sites which are known or assumed to be occupied by this species. Preferred roosting habitat is caves, crevices, and abandoned mines. None of the specified types of roost sites requiring protection are known to exist within the proposed treatment units

*Pacific Pallid Bat (Antrozous pallidus)*

*Silver-haired bat (Lasionycteris noctivagans)*

*Long-eared myotis (Myotis evotis)*

*Long-legged myotis (Myotis volans)*

*Yuma myotis (Myotis yumanensis)*

These species are listed as Bureau Tracking. The Amended NWFP (2001) calls for the protection of specific types of roost sites which are known or assumed to be occupied by bat species. These sites include mines, caves, abandoned wooden structures, and some types of bridges. These species appear to be habitat generalists with regard to foraging, but habitat specialists with regard to roost sites. Caves, crevices, abandoned buildings, or other similar structures are required for nursery colonies. None of the specified types of roost sites requiring protection are known to exist within the units proposed for treatment.

*Terrestrial molluscs (slugs and snails)*

Surveys have been completed in suitable habitat within the surrounding Bugman project. No known S&M mollusc species were located during these surveys.

*Franklin's Bumblebee (Bombus franklini)*

This is a Bureau Sensitive species. This Bumblebee appears to be dependant on open grassy meadow habitat for nesting and foraging. This habitat type is generally absent from the proposed treatment areas. No surveys are required and none have been performed.

The following table lists additional species in the following categories which are known or suspected to occur on the Ashland Resource Area:

<b>Bureau Special Status Species, NWFP Survey and Manage, Federally Listed Species (or candidates for listing) that are known or suspected to occur on the Ashland Resource Area</b>		
<b>Common Name</b>	<b>Scientific Name</b>	<b>Status</b>
American peregrine falcon	Falco peregrinus anatum	BS
Bald eagle	Haliaeetus leucocephalus	FT
Black-backed woodpecker	Picoides arcticus	BS
Ferruginous hawk	Buteo regalis	BS
Golden eagle	Aquila chrysaetos	EPA
Lewis' woodpecker	Melanerpes lewis	BS
Purple martin	Progne subis	BS
Red-necked grebe	Podiceps grisegena	BS
Streaked horned lark	Eremophila alpestris strigata	FC
Three-toed woodpecker	Picoides tridactylus	BS
White-headed woodpecker	Picoides albolarvatus	BS
Yellow-billed cuckoo (historically documented but likely extirpated from area)	Coccyzus americanus	FC
Northwestern pond turtle	Clemmys marmorata marmorata	BS
Siskiyou side band snail	Monadenia chaseana	S&M
Oregon shoulder band snail	Helminthoglypta hertleini	BS
Evening field slug	Deroceras hesperium	BS
Mardon skipper butterfly	Polites mardon	FC
BS = Bureau Sensitive FC = Federal Candidate for listing as Threatened or Endangered FT = Federal Threatened Species EPA = Protected by Bald and Golden Eagle Protection Act S&M = Northwest Forest Plan Survey and Manage Species		

## CHAPTER 4

### Environmental Consequences

#### A. INTRODUCTION

This chapter forms the scientific and analytic basis for comparison of alternatives. Discussions include the environmental impacts of the alternatives and any adverse environmental effects which cannot be avoided should the proposal be implemented. The impact analysis addresses direct, indirect, and cumulative impacts on all affected resources of the human environment, including critical elements. It also identifies and analyzes mitigation measures, if any, which may be taken to avoid or reduce projected impacts.

Only substantive site specific environmental changes that would result from implementing the proposed action or the no action alternative are discussed. If an ecological component is not discussed, it should be assumed that the resource specialists have considered effects to that component and found the proposed action would have minimal or no effects. General or "typical" effects from projects similar in nature to the proposed action alternative are also described in the documents to which this plan is tiered.

#### **Hydrology:** No Action Alternative

*Direct Effects:* With no on-the-ground actions, there would be no direct hydrologic effects. Conditions affecting streamflow and channel stability would not be affected directly.

*Indirect Effects:* Without on-the-ground actions, stream flows and channel stability would remain at current levels in the short-term. Within these units, it is likely that much of the moisture from all but the heaviest precipitation events would continue to be intercepted and utilized or evaporated away by the canopy of dense vegetation, with very little actually soaking in beyond the surface root zone and allowing it to contribute to deep soil moisture and groundwater storage. The lack of deep soil moisture availability to upland and riparian vegetation and reduced levels of groundwater available to sustain streamflows would continue to allow vegetation and streams to dry out more quickly than they probably would under more open stand conditions, further increasing the chances that any wildfire would be high-severity in nature. Small streams would continue to be at high risk for sudden changes in peak flow, sediment input, and down-cutting due to concentrated runoff following wildfires.

*Cumulative Effects:* Current hydrologic condition would remain the same. The ability of Riparian Reserves to withstand forest fires and control sediment impacts would remain compromised. Severe fires or other landscape level changes due to no action could further impact already-stressed riparian systems.

#### **Water Quality:** No Action Alternative

*Direct Effects:* There would be no direct effect on water quality or impacts to 303(d)-listed streams under this alternative.

*Indirect Effects:* See the sediment discussion in *Riparian Reserves*. High fuel loading in both the uplands and the outer portions of Riparian Reserves would maintain a high risk for severe, stand-replacing fires.

Sediment levels from tributaries in the project area would show substantial increases following a severe fire, as peak flows increased. Potential sources of future instream large wood could be significantly reduced, leading to additional inputs of sediment as wood levels declined over much of the next century. Likely inputs of sediment would occur from fire suppression-related disturbance. While there would be no immediate effect prior to a wildfire, water temperature could increase significantly for many years following a severe fire, and loss of large wood and loss of colluvial sediment storage in tributaries would increase the flashiness of streams, leading to decreased summer low flows and increased stream width/depth ratios, all of which could have a negative effect on stream temperatures.

*Cumulative Effects:* The effect of past fire suppression and vegetation management activities, combined with a decision to take no action, would maintain current high levels of risk for severe fire. With continued lack of treatment and the increasing risk of severe fire, significant negative impacts affecting water quality and 303(d)-listed streams could occur, particularly increasing levels of stream sedimentation and increased water temperatures following a severe fire. At the watershed scale, these impacts combined with the continuing level of negative impacts from other sources would lead to continued declines in condition. Future implementation of the Applegate Fire Plan and other fuel reduction activities on non-BLM lands could reduce the risk of severe fire on private lands, but negative water quality impacts originating on upstream lands would still affect downstream areas.

**Hydrology:** Proposed Action

*Direct Effects:* Treated areas would have a more open vegetative canopy, allowing for increases in soil moisture availability and runoff over current conditions. In the treated units, greater amounts of water from precipitation would likely infiltrate deeper into the soil, especially during smaller rainfall events that at present are mostly intercepted by vegetation canopies or near-surface roots. There would be no direct off-site hydrologic impacts.

*Indirect Effects:* In the treated units, more surface water would be likely to reach deep into the soil during the winter, allowing for greater levels of deep soil moisture and groundwater storage. This in turn would provide greater soil moisture availability to trees, as well as allowing some streams to have flow and moisture available to riparian vegetation for a longer period of time during the year, further increasing the chances that any wildfire would be low-intensity in nature within Riparian Reserves. Combined with fuel reduction treatments in some Reserves, this would reduce the chance that streams would be at high risk for sudden changes in peak flow, sediment input, and down-cutting due to concentrated runoff following wildfires, loss of fallen wood on the forest floor, and loss of protective duff layers.

*Cumulative Effects:* Although conditions would improve within the treated units, effects to stream flows and channel conditions at larger scales would not be detectable. Over the long term, Riparian Reserve and upland treatments could have a positive impact, especially if this project is successful in reducing on-site fire intensity, this project area receives future maintenance mimicking periodic low-intensity fire, other currently planned projects in the vicinity are implemented (including Ferris Bugman and China Keeler projects), and the Applegate Fire Plan is implemented on non-BLM lands in the area. Without a

coordinated effort throughout the area, the improvements from implementing this project alone would probably remain undetectable due to the continuing level of negative impacts from other sources.

**Water Quality: Proposed Action**

*Direct Effects:* The location of project units along with implementation of Project Design Features would assure that there would be no measurable direct effect on water quality under this alternative.

*Indirect Effects:* It is unlikely that there would be any sediment impacts to water quality from the proposed action. See the sediment discussion in *Riparian Reserves*. Reduced fuel loading and improved stand structure in the treated areas of both the uplands and the outer portions of Riparian Reserves would reduce risk for severe, stand-replacing fires. It is unlikely that sediment levels from tributaries in the project area would show substantial changes following this treatment or in the event of periodic, low-severity fire. Peak flows would increase slightly over pre treatment levels, but would remain within the range expected for a properly-functioning landscape setting. Any increase due to the project would be well below what would be expected if a severe, stand-replacement wildfire occurred. Maintenance of existing large wood and growth of future potential large wood as well as maintenance of colluvial sediment storage in tributaries would maintain or gradually increase summer low flows, and would maintain or decrease stream width/depth ratios. This would have a neutral to positive effect on stream temperatures.

*Cumulative Effects:* Given all the current and past impacts to riparian areas on both public and private land throughout this watershed, it is doubtful that the small amount of work proposed in this project would significantly improve overall water quality. However, this project combined with other projects (e.g., Ferris Bugman) reduces unnaturally high fuel loads and improves water quality. This approach would begin to have a measurable positive effect in the watershed over the long term.

**303(d) listed streams (Applegate River and Humbug Creek): Proposed Action**

*Direct Effects:* This project would have no direct effect on summer stream temperatures in the Applegate River or Humbug Creek, the only 303(d) listed streams in the vicinity of the project area.

*Indirect Effects:* This project would have no immediate indirect effect on summer stream temperatures in the Applegate River or Humbug Creek, since no treatment is being done that would affect shading along streams that flow during the summer months. Over the long term, stream temperatures would have a greater chance of improving if the project was successful in preventing an otherwise severe fire from reducing large, shade-providing vegetation.

*Cumulative Effects:* There would be no immediate change in cumulative effects related to high stream temperatures. Over the long term, Riparian Reserve and upland treatments could have a neutral to slightly positive impact, especially if this project is successful in reducing on-site fire intensity. The future maintenance burns coupled with the Applegate Fire Plan being implemented on non-BLM lands in the area displays a coordinated effort throughout the area.

**Riparian Reserves:** No Action Alternative

*Direct Effects:* With no on-the-ground actions, there would be no direct improvements or damage to Riparian Reserves.

*Indirect Effects:* Without on-the-ground actions, fuel loading in both the uplands and the outer portions of many Riparian Reserves would continue to keep Riparian Reserves at risk for severe, stand-replacing fires. Consequently, small streams would continue to be at high risk for sudden changes in peak flow, sediment input, and down-cutting due to concentrated runoff following wildfires, loss of fallen wood on the forest floor, and loss of protective duff layers especially on highly erodible soils. Although some Riparian Reserves in the project area are healthy and provide good habitat, others have extremely thick, dense, small diameter stands. In these areas of dense vegetation, trees would continue to grow very slowly, perpetuating the lack of late-successional riparian habitat. Competition for water in dense stands would continue to stress large diameter trees (both hardwood and conifer), making them more susceptible to disease and insect outbreaks. Along some streams, the dense forest canopy would continue to shade out riparian shrubs and forbs. All of these factors would impede natural stream functions and processes and ultimately reduce habitat and resources for aquatic animals and riparian dependant wildlife.

*Cumulative Effects:* Riparian Reserve habitat and condition would remain the same. The ability of Riparian Reserves to withstand forest fires and control sediment impacts would remain compromised. Severe fires or other landscape level changes due to inaction could further impact already-stressed riparian systems. In a natural system, this might not be an issue because wildlife could move to better habitat elsewhere, plants could re-seed from adjacent areas, and aquatic animals would also repopulate. However, the residential, agricultural and transportation impacts on private land in valleys, rivers, and mountain streams limit animal migration, block fish passage, divert water, and in general have seriously reduced riparian habitat.

**Fish and Other Aquatic Organisms:** No Action Alternative

*Direct Effects:* Without on-the-ground actions, there would be no direct benefits or harm to fish and other aquatic organisms.

*Indirect and Cumulative Effects:* Stream condition and fish habitat would remain the same. Lack of treatment puts this area at higher risk for a severe wildfire. As described in the Riparian Reserve section, such a fire could destroy remaining riparian habitat and increase sediment input, thus negatively impacting fish habitat.

**Riparian Reserves:** Proposed Action Alternative

*Direct Effects:* Habitat and function of Riparian Reserves would be improved. The Riparian Reserves in the project area that are treated would benefit from thinning activities, especially in the intermittent stream channels where riparian vegetation is limited and brush and small diameter trees may provide a “chimney” of dry materials through which a high intensity fire could be carried. In some perennial and intermittent streams, brush and small trees would be thinned within the Riparian Reserves to encourage the growth of remaining trees, thus increasing stand structure and diversity. The remaining trees would grow bigger, faster, and thinning the smaller trees could encourage development of an herbaceous understory. These treated Reserves would provide more habitat diversity and refugia in the event of large fires or other landscape-level changes. Riparian Reserves that are overgrown with brush and small diameter conifers would benefit from thinning and subsequent increases in species diversity and improved growing conditions.

It is unlikely that burning handpiles within Riparian Reserves would contribute any sediment to the small intermittent (dry in the summer and fall) and perennial streams within the units. The 25 feet “no burn” buffers along each side of streams would ensure that any open areas of ash or soil would not contribute fine sediments to stream channels. In most cases, thick duff and ground vegetation may prevent sediment from reaching the stream. Most handpiles have a ring of unburned vegetation around them after the pile has been burned. This further reduces the likelihood that any sediments or ash would be contributed to the streams as it acts as a buffer should there be overland flow during a rain event. Therefore, there is a less than negligible chance of negatively affecting water quality for coho salmon, steelhead, or other fishes and aquatic animals. In addition, the piles should not contribute any sediment above natural background levels. The “no treatment” buffer would not be part of the prescribed underburn. Instead of digging a hand line parallel to the stream, fire would be allowed to back into this area, mimicking natural fire conditions. Normally, these riparian systems would burn occasionally, contributing nutrients, ash, and sediment until the landscape healed the following spring. Burning piles of brush underneath the canopy with adjacent intact duff and litter layers would not approximate the intensity of even a prescribed burn.

In the larger landscape, burning the handpiles and subsequent underburns would reduce fuels in the units so that future wildfires would produce a more natural, mosaic burn with a restorative effect on the Riparian Reserves (healthier and more diverse plant communities, increased food and nutrient abundance for wildlife, birds and aquatic organisms, etc).

*Indirect Effects:* The upland and Riparian Reserves treatments would reduce the risk of severe, stand-replacing fires in Riparian Reserves, although untreated Reserves would still be at high risk under certain fire conditions. The treatments would consequently reduce the risk of sudden



changes in peak flow, sediment input, down-cutting due to concentrated runoff, loss of fallen wood on the forest floor, and loss of protective duff layers following wildfire. Upland conifer thinning, prescribed fire, and shrub/grass/oak woodland treatments would improve overall watershed health, ultimately benefitting aquatic systems by restoring more natural ecological processes.

*Cumulative Effects:* While ecological condition in these watersheds would probably remain outside the range of natural variability due to ongoing effects of past fire suppression and associated lack of vegetation management, this project would begin to move a portion of these watersheds back into the range of natural variability. Given all the current and past impacts to riparian areas on both public and private land throughout these watersheds (e.g., highways, residences, fire suppression, commercial businesses, farming, river channelization, gravel extraction, logging, gold mining) it is doubtful that the small amount of thinning in Riparian Reserves would significantly improve overall riparian health. However, connectivity and riparian function would be improved in segments of these watersheds.

**Fish and Other Aquatic Organisms :** Proposed Action Alternative

*Direct Effects:* This project would have no direct effect on fish.

*Indirect Effects:* Over time, thinning in the treated areas would result an increase in large woody debris which would restore natural sediment controls in these streams. Increased fine sediment retention and reduced runoff would consequently reduce sediment loading in downstream fish habitat.

The reduced risk of severe wildfire lessens the chance of impacts of such a fire, such as destruction of riparian habitat and increases in sediment.

*Cumulative Effects:* Riparian Reserve treatments would have no negative effect on fish. Reducing the risk of severe wildfire and the resulting sediment inputs would provide long term improvements to downstream habitat for fishes and other aquatic organisms. However, reduced sediment input or threat of sediment input may be offset by other human caused problems as the valley population increases, including continued floodplain development, roads, timber harvest, and road construction on private land.

**Threatened and Endangered Aquatic Species and Essential Fish Habitat**

This project is determined to have “No Affect” on listed coho salmon, their Critical Habitat, or Essential Fish Habitat. The project is “No Affect” because project design features, Riparian Reserve stipulations, and site conditions would ensure that there is a less than negligible chance of negatively affecting water quality for resident fishes and aquatic organisms.

There would be no impacts to coho salmon, coho critical habitat, or essential fish habitat from upland thinning using the slashbuster or from pile burning. Natural ecosystem processes should be improved and no fine sediments, flow problems or other potentially harmful physical changes should negatively impact stream conditions and coho habitat due to the following:

- the distance of treatment areas from coho habitat (closest unit is 3/4 mile away from coho)
- restrict fine sediment control techniques on all proposed activities
- buffering of all Riparian Areas
- protection of possible unstable soil areas
- care to mimic natural fire conditions with prescribed burning

#### Adherence of Proposed Action to Aquatic Conservation Strategy Objectives

The project would not violate any of the Aquatic Conservation Strategy Objectives (ACS). Project design features including strict fine sediment control, Riparian Reserve stipulations, and protection of unstable areas would insure that the objectives would be maintained or restored. Water quality, distribution, diversity and complexity of watershed features, spatial and temporal connectivity within and between watersheds, physical integrity of the aquatic system, the sediment regime, in-stream flows, species composition and structural diversity of plant communities in riparian areas and wetlands, populations of native plant, invertebrate, and vertebrate riparian-dependent species would all be maintained or restored from treatment.

#### **Botany:** No Action Alternative

The no action alternative would have no direct affect on the continued persistence of the Federally listed *Fritillaria gentneri* or the Bureau Special Status Plant *Clarkia heterandera* within the confines of the proposed Slashbuster IV units. Detrimental indirect and cumulative effects might result if management activities allow fuel levels to accumulate to the point that a stand destroying fire occurs.

At least one noxious weed species, *Centaurea solstitialis* (1 section) occurs within the project area in open disturbed sites. Noxious weeds can out-compete the native flora, and rare plants, for water, light and space. If left un-treated, noxious weeds can reduce habitat suitability for the Bureau Special status plants adapted to those habitats. With the no action alternative, noxious weeds will continue to spread.

#### **Botany:** Proposed Action; Vascular Plant Species

The proposed action alternative would have no direct, indirect, or cumulative affect on the continued persistence of the Federally listed *Fritillaria gentneri* or the Bureau Special Status Plant *Clarkia heterandera* within the confines of the proposed Slashbuster IV units.

#### **Wildlife:** No Action Alternative

This alternative would have no immediate negative effect on species using the area. However, the fuel accumulation in the area would continue to increase the risk of stand replacement wildfires. In the event

of a stand replacement fire in the project area, many acres of suitable habitat for some of wildlife species could be lost. The benefits of oak woodland and brushfield thinning include increased forage production for a wide variety of wildlife and increased vegetative structural diversity and plant species diversity. Disturbance is a natural part of the ecosystems in the proposed project area, and the no action alternative would forego the reintroduction of disturbance to the area.

**Wildlife:** Proposed Action Alternative

The general effects of timber harvest and fire management activities on wildlife and wildlife habitat are discussed in Chapter 4, pages 51-65, and other portions of the BLM Medford District Resource Management Plan, October 1994.

Treatments such as pre-commercial thinning and pile burning are designed to promote forest health and are expected to benefit some wildlife species by restoring these communities to historic habitat conditions. The benefits of oak woodland and brushfield thinning include increased forage production for a wide variety of wildlife, and increased vegetative structural diversity and plant species diversity.

**Threatened/Endangered Species - Northern Spotted Owl**

No treatments are proposed in spotted owl nesting or dispersal habitats. No change in northern spotted owl habitat function is expected due to the treatments proposed in this project.

Programmatic consultation with the USFWS on this project is covered by biological opinion # 1-7-96-F392, issued by the USFWS on Oct. 18 1996. The USFWS concluded that the projects covered in the consultation, including actions of the type proposed, were not likely to jeopardize the continued existence of the northern spotted owl.

**Special Status Species**

No large-scale change in habitat function or other detrimental effects are expected for any Special Status Species due to the treatments proposed in this project. Seasonal restrictions are recommended to minimize short-term effects from proposed treatments during the spring reproductive periods.

**Great Gray Owl**

The reduction of understory and thinning of brushfields is expected to improve foraging habitat for this species. No treatment activities are proposed in suitable nesting habitat.

## B. CRITICAL ELEMENTS

The following elements of the human environment are subject to requirements specified in statute, regulation, or executive order and must be considered in all EAs.

Critical Element	Affected		Critical Element	Affected	
	Yes	No		Yes	No
Air Quality	✓*		T & E Species		✓
ACECs		✓	Wastes, Hazardous/Solid		✓
Cultural Resources		✓	Water Quality		✓
Farmlands, Prime/Unique		✓	Wetlands/Riparian Zones		✓
Floodplains		✓	Wild & Scenic Rivers		✓
Nat. Amer. Rel. Concerns		✓	Wilderness		✓
Invasive, Nonnative Species		✓	Energy Resources (EO 13212)		✓
			Environmental Justice		✓

\*These affected critical elements would be impacted by implementing the Proposed Action. The impacts are being reduced by designing the Proposed Action with project design, Best Management Practices, Management Action/Direction, Standard and Guidelines as outlined in the Environmental Impact Statements (EIS)/Record of Decisions (*RMP*) (*USDI BLM 1995*)(*USDA FS; USDI BLM 2001*) tiered to in Chapter 1. The impacts are not affected beyond those already analyzed by the above-mentioned documents.

## CHAPTER 5

### A. LEGAL CONSULTATION

#### Federal Agencies:

U.S. Fish and Wildlife Service  
U.S. National Marine Fisheries Service  
Rogue River National Forest

#### State and Local Agencies:

Oregon Department of Fish & Wildlife  
Oregon Department Forestry  
Jackson Co. Commissioner

### B. DISTRIBUTION LIST AND AVAILABILITY ON THE INTERNET

This EA was distributed to the following agencies and organizations.

#### ORGANIZATIONS

Applegate River Watershed Council  
Audubon Society  
Klamath Siskiyou Wildlands Center  
Headwaters  
Oregon Natural Resource Council

The Pacific Rivers Council  
Association of O&C Counties  
Southern Oregon Timber Industry Assoc.  
Southern Oregon University

#### Federally Recognized Tribes

Cow Creek Band of Umpqua Indians  
Confederated Tribes of Grand Ronde  
Confederated Tribes of Siletz  
Klamath Tribe  
Quartz Valley Indian Reservation (Shasta  
Tribe)  
Shasta Nation

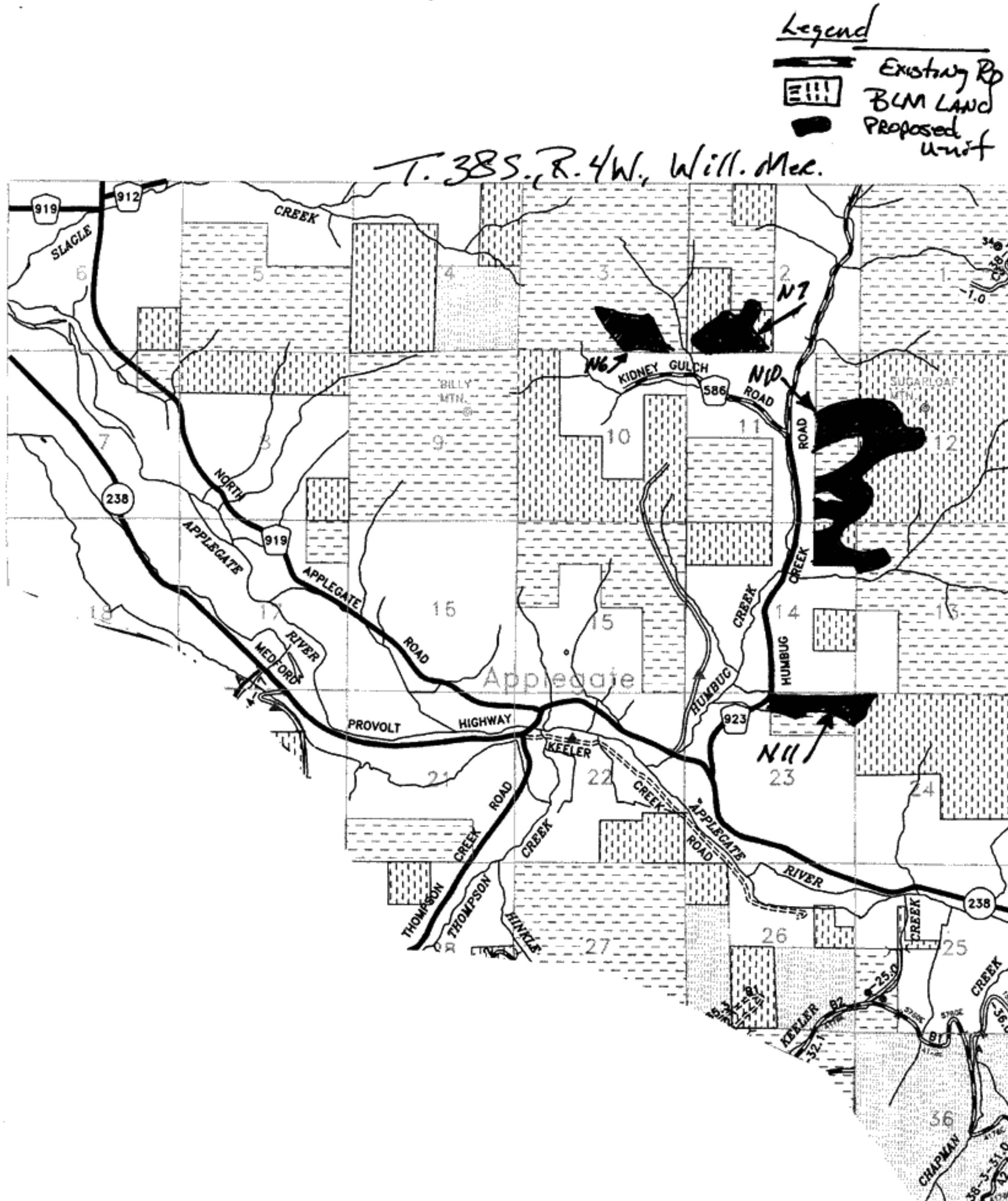
#### Other Tribes

Confederated Bands [Shasta]  
Shasta Upper Klamath Indians  
Confederated Tribes of the Rogue-  
table Rock and Associated Tribes

### C. AVAILABILITY

A copy of this EA is available upon request from the Ashland Resource Area, Bureau of Land Management, 3040 Biddle Road, Medford, OR 97540. For more information call Bill Yocum at (541) 618-2384. It is also accessible online at [www.or.blm.gov/medford](http://www.or.blm.gov/medford), under "Planning" link. The EA has also been placed in the public reading room at the BLM office (above address) and a copy sent to the Southern Oregon University Library.

# Slashbuster 4 & Manual Treatments Unit Location Map



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